

Smooth green snake

Liochlorophis vernalis

By Dennis C. Joyes



“He’s cute,” announced my six-year-old niece. When it comes to animals, Annika is the judge of all things adorable. In this case, however, the object of interest was not a kitten or a newborn calf. Instead, I had just caught a smooth green snake, a seldom-seen species that inhabits mixed-grass prairies and wetlands in northeastern Montana. They are “cute” by virtue of being one of the smallest snakes in the state and the only one green in color. Although extremely shy, smooth green snakes are docile when handled, are not venomous, and do not bite. What’s more, their insect-based diet makes them a friend of farmers and gardeners.

IDENTIFICATION

Smooth green snakes are pure green, with a milky white to cream underside and no markings. The tongue is red with a black tip. In Montana the species runs from 12 to 28 inches long. Most of the ones I’ve seen are around a foot long and as slender as a pencil. Their color and size make the snakes all but invisible in green vegetation. But on bare ground they are easily spotted and a rather surprising sight. The snakes are “smooth” in two respects: They have no

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pattern and, lacking keeled scales, have a silky feel—a feature that sets them apart from the rough green snake of the southeastern United States.

HABITS

Smooth green snakes are active from April through September, and then only when the temperature is above 70 degrees. Adults feed almost exclusively on spiders and insects, including grasshoppers, crickets, beetles, ants, and caterpillars. Hawks and garter snakes are among their known predators. Smooth green snakes hibernate in animal burrows or ant mounds, both abundant in the state’s northeastern corner.

REPRODUCTION

Nesting takes place from late July through August in rodent burrows, under rocks, or in piles of decaying vegetation. Several females may share a nest. They each lay, on average, six whitish, 1-inch-long eggs. The young emerge in late August or early September after an incubation of about two weeks.

DISTRIBUTION AND HABITAT

Smooth green snakes have a wide but patchy distribution in North America—what biologists call “disjunct populations.” Isolated populations are scattered across the Great

OUTDOORS PORTRAIT

Plains and West from Iowa and Nebraska to low-elevation areas of Utah, Colorado, and New Mexico.

The usual explanation for a species showing up in unconnected regions is that it was once more widely distributed but, as the environment changed (perhaps as long ago as the end of the last ice age), isolated populations were left behind in pockets of favorable habitat.

The smooth green snake’s primary range extends from the Great Lakes eastward to Maine and the other New England states. The Montana population, although not isolated, exists at the tail end of a narrow corridor extending west from Minnesota along the Canada-U.S. border. In Montana, the smooth green snake has been observed only in three northeastern counties: Sheridan, Daniels, and Roosevelt. Even there, the species was not officially reported until 1968,

Scientific name

Liochlorophis is likely a formation of the Latin *lio* for “lion” and *chloro* for “green.” *Vernalis* comes from the Latin *vernal*, which means “from spring.”

and no specimens were collected until 1998.

Smooth green snakes appear to be thriving in Medicine Lake National Wildlife Refuge and in the pothole prairies of eastern and northern Sheridan County. Most sightings actually occur in rural backyards and gardens, where the snakes are drawn to the moist irrigated habitat and rich insect life.

CONSERVATION STATUS

Because of its very limited distribution and narrow habitat requirements, the smooth green snake is listed as a species of concern in Montana. The main threats come from pesticides that eliminate the insects they eat, climate change that creates drier conditions, and road mortality from increased traffic caused by the Bakken oil boom. FWP, The Nature Conservancy, Ducks Unlimited, and other organizations are working to preserve wetlands and native prairies of northeastern Montana. One of the many species to benefit from that conservation work will be this cute little reptile. 🐍